



U.S. Department of Energy  
**Office of River Protection**  
P.O. Box 450, MSIN H6-60  
Richland, Washington 99352

0074186

OCT 22 2007

07-ESQ-193

Ms. Jane A. Hedges, Program Manager  
Nuclear Waste Program  
Washington State  
Department of Ecology  
3100 Port of Benton Blvd.  
Richland, Washington 99354

**RECEIVED**  
OCT 23 2007  
**EDMC**

Dear Ms. Hedges:

SUBMITTAL OF THIRD QUARTER 2007 ASSESSMENT OF STACK SAMPLES PER  
WASHINGTON STATE DEPARTMENT OF ECOLOGY (ECOLOGY) NOTICE OF  
VIOLATION NUMBER DE 4218

Reference: Ecology letter from J. A. Hedges to S. J. Olinger, ORP, "Finding of Violation of  
Order DE05NWP-002, Revision 1," dated April 10, 2007. 0072670

In accordance with the Reference, the U.S. Department of Energy, Office of River Protection is submitting an assessment of stack samples potentially indicating pollutants emitted from operations relevant to Ecology Notice of Construction (NOC) Approval Order DE05NWP-002, Revision 1, for the third quarter Calendar Year (CY) 2007. Item 2 of the Reference states:

"Prepare and submit assessment of stack and environmental samples potentially indicating pollutants emitted from operations under Order DE05NWP-002, Revision 1, for the four calendar quarters of 2007.

- a. Your assessments must be submitted within 45 days following the calendar quarters ending March 31, June 30, September 30, and December 31, 2007.
- b. Your assessment must detail
  - i. The sampling dates,
  - ii. TAPs identified,
  - iii. Demonstration of the validity of laboratory results of the analyses, and
  - iv. Assessment of the source of the pollutant."

Per Item 2.b.i of the Reference, the following sample dates have occurred during late in the second quarter and third quarter of CY 2007 (June 20, 2007, through September 30, 2007) specific to Single-Shell Tank (SST) retrieval activities completed under Approval Order DE05NWP-002, Revision 1 (in effect until July 30, 2007) and DE05NWP-002, Revision 2 (effective July 31, 2007).

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Stack sampling at Exhauster 296-P-47 at SST 241-C-109 was completed on June 20, 2007, and July 3, 2007 (data outlined below). Selected are the three toxic air pollutants with the highest potential ambient concentration relative to their acceptable source impact levels, as listed in Washington Administrative Code 173-460, from the 241-C-109 tank. Also included was a fourth compound based on best engineering judgment. These chemicals are all listed within Table 2 of NOC Approval Order DE05NWP-002, Revision 1:

- Maximum results for nitric oxide (Chemical Abstracts Service Registry Number 10102-43-9) were 1.592 ppm on July 3, 2007, and 0.004 ppm on June 20, 2007.
- Maximum results for ammonia (Chemical Abstracts Service Registry Number 7664-41-9) were 39.047 ppm on July 3, 2007, and 29.598 ppm on June 20, 2007.
- Maximum results for elemental mercury (Chemical Abstracts Service Registry Number 7439-97-6) were 0.107 mg/m<sup>3</sup> on July 3, 2007, and 0.01 mg/m<sup>3</sup> on June 20, 2007.
- Maximum results for formaldehyde (Chemical Abstracts Service Registry Number 50-00-0) were 0.014 ppm on July 3, 2007, and 0.02 ppm on June 20, 2007.

Per Item 2.b.iii of the Reference, the validity of the laboratory results has been evaluated in accordance with CH2M HILL Hanford Group, Inc.'s Industrial Hygiene screening criteria. All results were considered valid when at or above the method detection limit.

Per Item 2.b.iv of the Reference, these samples were drawn directly from the exhauster during the initial retrieval of SST 241-C-109 and at 50 percent completion of same. They are representative of emissions during active waste disturbing retrieval operations.

If you have any questions, please contact me, or your staff may contact Dennis W. Bowser, Office of Environmental Safety and Quality, (509) 373-2566.

Sincerely,

*T. J. Olinger*  
for

Shirley J. Olinger, Acting Manager  
Office of River Protection

ESQ:DWB

cc: See page 3

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cc: B. G. Erlandson, BNI  
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*H-0-9*  
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